



**PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Chiaki HAMADA et al.

Group Art Unit: 3664

Application No.: 10/815,765

Examiner: R. MANCHO

Filed: April 2, 2004

Docket No.: 119332

For: VEHICLE BRAKING CONTROL DEVICE FOR BRAKING FORCE DISTRIBUTION

**REPLY BRIEF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The following remarks are directed to the new points of argument raised in the Examiner's Answer dated March 19, 2010. In summary, Appellants explain that: (1) the Examiner's interpretation of Watanabe's Figs. 3 and 4 is erroneous, (2) Appellants have thoroughly and accurately explained Watanabe's Fig. 4, and (3) all of Appellants' arguments are relevant and should be considered.

**1. The Examiner's Interpretation Of Watanabe's Figs. 3 and 4 Is Erroneous**

The Examiner's Answer incorrectly interprets Watanabe's Figs. 3 and 4. For example, the Examiner's Answer incorrectly states that:

a) braking force distribution control (BFD control) is performed at Fig. 4, step 37 (Examiner's Answer, page 9, line 18);

b) Watanabe's Fig. 4 discloses anti-skid control (ABS control) during BFD control (Examiner's Answer, page 9, line 8 - Appellants did not admit that this occurs in response to page 9, lines 7-10 of the Examiner's Answer); and

c) ABS control "MUST" be started during BFD control (Examiner's Answer, page 10, line 1).

Appellants address each statement in turn.

**a. BFD Control Is Not Performed At Watanabe's Fig. 4, Step 37**

Watanabe's Fig. 3 is a flowchart illustrating a brake control routine, and Fig. 4 is a flowchart illustrating a control scheme executed at step S30 in order to determine if BFD control is allowed. (Watanabe's paragraphs [0031], [0032]). Watanabe does not state that Figs. 3 and 4 illustrate a BFD control process, contrary to the Examiner's Answer (page 9, line 22). According to Watanabe, and as discussed in more detail below, BFD control may or may not occur in the brake control routine.

Watanabe's paragraph [0075] and Fig. 4 discuss and illustrate determining whether ABS control is being performed in order to determine if BFD control should be allowed. (Step S30, Fig. 3). The Examiner previously asserted that BFD control is allowed in Watanabe if ABS control is being performed on both of the front wheels (Watanabe's Steps S33: No, S34: No and S37 of Fig. 4), while Appellants do not concede that Fig. 4 was so intended or that one of ordinary skill in the art would so understand it. When BFD control is allowed at step S37, the control proceeds to step S40 of Fig. 3 for further processing.

Therefore, Watanabe does not disclose that BFD control is performed at step 37. As clearly stated at Fig. 4, step S37 and paragraph [0076], lines 15-18, Watanabe determines whether BFD control is allowed. BFD control being allowed is not the same as BFD control being performed according to Watanabe.

**b. Watanabe's Fig. 4 Does Not Disclose ABS Control During BFD Control**

As stated above, Watanabe's paragraph [0075] and Fig. 4 discuss and illustrate determining whether ABS control is being performed in order to determine if BFD control should be allowed. (Step S30, Fig. 3). ABS control thus does not occur during BFD control according to Watanabe's Fig. 4 because BFD control has not started. More significantly, Watanabe's Fig. 4 does not disclose ABS control being started during BFD control, or decreasing the braking force on the front wheels during BFD control as recited in claims 1 and 12.

If BFD control is allowed, Watanabe later discloses increasing the braking force applied to the front wheels by a pressure increase amount A' at step S100 if an affirmative decision is made at step S50. (Watanabe's paragraphs [0070] - [0073] and Steps S30: Yes; S50: Yes; and S80-S110 of Fig. 3). If a negative decision is made at step S50, then the braking pressure does not increase.

Watanabe's paragraphs [0075] and [0076] and Fig. 4 thus do not consider having ABS control started during BFD control as recited in claims 1 and 12 because Watanabe is determining whether or not BFD control should be allowed. Most significantly, Watanabe does not disclose decreasing the braking force on the front wheels during BFD control in the event, *arguendo*, that ABS control is started during BFD control as recited in claims 1 and 12. Watanabe also does not disclose performing ABS control at steps S80-S110 or while BFD control is being performed, and the Examiner has not provided evidence to this effect in order to show that Watanabe anticipates claims 1 and 12. Watanabe also does not disclose rendering BFD control compatible with ABS control, thus further supporting Appellants' position that Watanabe fails to anticipate claims 1 and 12.

**c.     The Examiner Has Not Set Forth Any Evidence To Show That ABS Control "MUST" Be Started During BFD Control**

Watanabe does not state that ABS control must be started during BFD control, and the Examiner has not set forth any evidence to support this position. The Examiner has thus not shown that Watanabe discloses (either explicitly or implicitly) all of the features recited in the claims.

Watanabe's paragraphs [0075] and [0076] and Fig. 4 do not state when ABS control is started, and do not state that BFD control is already occurring. Watanabe's paragraph [0062] discusses performing ABS control by calculating the target brake pressure Pti of each wheel in accordance with a braking amount by a vehicle operator, while calculating the target brake pressure Pti so as to decrease excessive brake slip of the wheels. Watanabe's paragraph [0068] states, "when anti-skid control is necessary, the target brake pressure Pti required for reducing excessive brake slip of the wheel is calculated in a way well known in the technical field." Watanabe's paragraphs [0062] and [0068] do not discuss BFD control, and Watanabe's paragraphs [0062], [0068], [0075] and [0076] and Fig. 4 do not consider having ABS control started during BFD control as recited in claims 1 and 12.

In addition, Watanabe's paragraph [0075] and Fig. 4 state and illustrate that BFD control is not allowed if ABS control is being performed on either of the front wheels. (Watanabe's Steps S33: Yes, S34: Yes and S38 of Fig. 4, paragraph [0075]). Watanabe's ABS control thus does not have to occur or start during BFD control because Watanabe discusses a scenario where ABS control occurs when BFD control is not allowed.

Page 9 of the Examiner's Answer (lines 1-3) states that BFD control and ABS control should not be confused. Watanabe's paragraph [0062] does state that ABS control is performed to decrease excessive slip, and paragraph [0072] does state that the braking force is increased during BFD control. Watanabe does not discuss ABS control being started during

BFD control. Further, even if it was considered possible for ABS control to start during BFD control, Watanabe does not disclose decreasing the braking force on the front wheels during BFD control as recited in claims 1 and 12. Appellants do not agree with the Examiner's Answer, page 8, lines 13-15. Watanabe's paragraph [0062] clearly and word for word does not indicate that, during the execution of ABS control, braking force distribution on the wheels is decreased because Watanabe does not use the phrase "braking force distribution" or discuss BFD control.

**2. Appellants Have Thoroughly and Accurately Explained Watanabe's Fig. 4**

The Examiner's Answer states that Appellants have misinterpreted Watanabe because Appellants did not consider all of the possible scenarios in Watanabe's Fig. 4. In particular, Appellants allegedly did not address the scenario where ABS control is being performed on both of the front wheels (step S33: No; step S34: No; step S35: No; step 36: Yes; step S37). (Examiner's Answer, page 9, lines 4-15). Appellants disagree.

Appellants' Appeal Brief addressed the Examiner's assertion that BFD control is allowed in Watanabe if ABS control is being performed on both of the front wheels (step S33: No; step S34: No; step 37). (Appellants' Appeal Brief, pages 17 and 18, Facts 36-41, and page 26, line 8 - page 27, line 5). Although Appellants do not concede that Fig. 4 was so intended to be interpreted as asserted by the Examiner, or that one of ordinary skill in the art would so understand it, Appellants do not agree that Watanabe's Fig. 4 was not accurately and thoroughly explained.

Appellants also note that the Examiner's Answer makes contradictory statements. The Examiner's Answer alleges that Appellants are admitting that Watanabe discloses ABS control during BFD control by pointing to Watanabe's Fig. 4, step S33: No; step S34: No; step S35: No; step 36: Yes; step S37 (Appellants did not make this admission). (Examiner's Answer, page 9, lines 7-10). In the very next sentence, the Examiner's Answer refers to the

same scenario. That is, the Examiner alleges that Appellants deliberately failed to address step S33: No; step S34: No; step S35: No; step 36: Yes; step S37. (Examiner's Answer, page 9, lines 10-11).

**3. All Of Appellants' Arguments Are Relevant And Should Be Considered**

The Examiner's Answer states that several of Appellants' arguments are irrelevant because they are not related to the claims. In particular, the Examiner's Answer states that: a) Appellants' arguments asserting that Watanabe does not explain how to perform ABS control and BFD control simultaneously is not relevant (Examiner's Answer, page 10, lines 5-7), b) the claims do not require that there should be consideration whether BFD control is already occurring (Examiner's Answer, page 10, lines 8 and 9), and c) Appellants' arguments on pages 19 and 20 of the Appeal Brief are beyond the scope of the claimed invention. Appellants do not agree with the Examiner's comments, and discuss each in turn.

a) Claims 1 and 12 recite that, when execution of the ABS control is started during the BFD control, the braking force on the front wheels is decreased during the BFD control. Watanabe's failure to explain how to perform ABS control and BFD control simultaneously (i.e., during), further supports Appellants argument that Watanabe fails to disclose all of the features of claims 1 and 12.

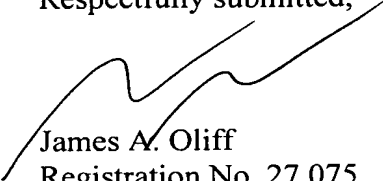
b) Consideration must be given as to whether BFD control is already occurring. Otherwise, it cannot be determined whether or not Watanabe discloses starting ABS control during BFD control, or decreasing the braking force on the front wheels during the BFD control, as recited in claims 1 and 12.

c) The Appeal Brief, pages 19 and 20, explain Appellants' invention in order to aid in the understanding and interpretation of claims 1 and 12. The Examiner must understand Appellants' invention in order to understand the claims and to determine if Watanabe discloses all of the features of claims 1 and 12.

\* \* \* \* \*

For the foregoing reasons, as well as the reasons set forth in Appellants' April 30, 2009 Appeal Brief, Appellants respectfully request this Honorable Board to reverse the rejection of claims 1-15.

Respectfully submitted,



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Date: May 3, 2010

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